IN THE CLAIMS:

1. (Amended) A method of producing a PDP, the method comprising:

a first step of forming a front cover plate by forming a first electrode and a dielectric glass layer on a front glass substrate then forming a protecting layer of an alkaline earth oxide [with one] of [(100)-face orientation and] (110)-face orientation on the dielectric glass layer; and

a second step of forming a back plate by forming a second electrode and a fluorescent substance layer on a back glass substrate then bonding the front cover plate, on which the protecting layer has been formed, with the back plate, and charging a gas medium into a plurality of discharge spaces which are formed between the front cover plate and the back plate, the front cover plate and the back plate facing to each other.

2. (Original) The method of producing a PDP of claim 1, wherein

in the first step, the protecting layer is formed with one of a thermal Chemical Vapor Deposition method and a plasma Chemical Vapor Deposition method by using an alkaline earth organometallic compound and oxygen.

3. (Original) The method of producing a PDP of claim 2, wherein

the alkaline earth organometallic compound used in the first step is one of an alkaline earth metal chelate compound and an alkaline earth cyclopentadienyl compound.

4. (Original) The method of producing a PDP of claim 3, wherein

the alkaline earth organometallic compound used in the first step is one of $M(C_{11}H_{19}O_2)_2$, $M(C_5H_7O_2)_2$, $M(C_5H_5F_3O_2)_2$, and $M(C_5H_5)_2$, wherein M represents one of magnesium, beryllium, calcium, strontium, and barium.

5. (Amended) A method of producing a plasma display panel having a plurality of discharge space cells with a front substrate and a rear substrate and walls separating each cell, each discharge space is addressable by display electrodes to cause the cell to emit light comprising:

depositing a protective layer of an alkaline earth oxide having [one of a (100) crystal face orientation and] a (110) crystal face orientation extending across a top surface of each cell; and

charging each cell with a discharge gas.

6. (Original) The plasma display panel method of claim 5 wherein each cell is pressurized to pressure of approximately 500 to 760 Torrs.

7. (Original) The plasma display panel method of claim 6 wherein each cell is charged with an xenon discharge gas between 10% by volume to approximately 100% by volume.

8. (Original) The plasma display panel method of claim 7 wherein one of argon, kryptor, helium and neon is mixed with the xenon.

9. (Original) The plasma display panel method of claim 7 wherein one of argon and krypton is mixed with the xenon in sufficient volume to provide ultraviolet light emission at a wavelength of 173 nm.

10. (Original) The plasma display panel method of claim 7 wherein two additional discharge gases within the range of 10% to 50% by volume are mixed with the xenon.

11. (Original) The plasma display panel method of claim 6 wherein a distance between adjacent display electrodes in the same plane is no greater than 0.1 mm.

12. (Original) The plasma display panel method of claim 5 wherein the protective layer is selected from a group consisting of MgO, BeO, CaO, SrO and BaO.

13. (Original) The plasma display panel method of claim 5 wherein the protective layer is magnesium oxide with a crystal face orientation of (110).

14. (Amended) The plasma display panel method of claim 5, wherein the first substrate includes a dielectric glass layer and the dielectric glass layer is heated to a temperature between 350° C[.] to 400° C[.] during the depositing of the protective layer by a thermal chemical vapor deposition.

15. (Amended) The plasma display panel method of claim 5, wherein the front substrate includes a dielectric glass layer and the dielectric glass layer is heated to a temperature between 250° C[.] to 300° C[.] during the depositing of the protective layer by a plasma enhanced chemical vapor deposition.

16. (Original) The plasma display panel method of claim 5, wherein the front substrate includes an upper glass plate and a lower dielectric glass layer, and display electrodes are formed from depositing a conductive paste on the upper glass plate, the paste is then baked to harden it and subsequently is sandwiched with the lower dielectric glass layer.

17. (Original) The plasma display panel method of claim 5, wherein the protective layer is deposited by transferring a paste of the alkaline earth oxide to the front substrate and baking it.

18. (Original) The plasma display panel method of claim 17, wherein the paste is a magnesium salt with a plate-shaped crystal structure.

19. (Original) The plasma display panel method of claim 18, wherein the paste is magnesium oxalate formed by dissolving ammonium oxalate in a magnesium chloride aqueous solution and heating it to form the plate-shaped crystal structure.

20. (Original) The plasma display panel method of claim 5, wherein the depositing of the protective layer is made by evaporating the alkaline earth oxide with an ion/electron beam in a vacuum.

21. (Original) A method of producing a plasma display panel having a plurality of discharge space cells, each discharge space cell is addressable by display electrodes to cause the cells to emit light, comprising:

depositing a protective layer of an alkaline earth compound selected from the group consisting of $M(C_{11}H_{19}O_2)_2$, $M(C_5H_7O_2)_2$, $M(C_5H_5F_3O_2)_2$, and $M(C_5H_5)_2$, wherein M represents one of magnesium, beryllium, calcium, strontium, and barium, the protective layer having one of a (100) crystal-face orientation and a (110) crystal-face orientation extending across a surface of each cell; and

charging each cell with a discharge gas.

22. (Original) The plasma display method of claim 21, wherein the protective layer is deposited by one of a thermal chemical vapor deposition step and a plasma enhanced chemical vapor deposition step.

23. (Original) The plasma display method of claim 22, wherein the discharge gas includes at least 10% by volume Xe and is at a pressure of at least 500 Torr.

24. (Original) The plasma display method of claim 23, wherein the discharge gas includes one of Ar and Kr.

25. (Amended) The plasma display method of claim 23 wherein the discharge gas is selected from a group consisting of [Ar-He-Xe,] Ar-He-Xe, Kr-Ne-Xe, and Kr-He-Xe and the amount of Kr, Ar, He, or Ne should be in the range of 10% to 50% by volume.

26. (Original) The plasma display method of claim 23, wherein the alkaline earth compound is selected from the croup consisting of magnesium dipivaloyl methane, magnesium acetylacetone, magnesium trifluoroacetylacetone, and cyclopentadienyl.

27. (Original) A method of producing a plasma display panel having a plurality of discharge space cells, each discharge space cell is addressable by display electrodes to cause the cell to emit light, comprising:

depositing a protective layer selected from the group consisting of magnesium dipivaloyl methane, magnesium acetylacetone, magnesium trifluoroacetylacetone, and cyclopentadienyl magnesium across a surface of each cell to provide one of a (100) crystal-face orientation and a (110) crystal-face orientation; and

charging each cell with a discharge gas including at least 10% by volume Xe at a pressure of at least 500 Torr.

28. (Amended) A method of producing a PDP, the method comprising:

a first step of forming a front cover plate by forming a first electrode and a dielectric layer on a front glass substrate, then forming a protecting layer of an alkaline earth oxide with (110)-face orientation on the dielectric layer; and

a second step of forming a back plate by forming a second electrode and a fluorescent substance layer on a back glass substrate;

a third step of bonding the front cover plate with the back elate and introducing a gas medium into a plurality of discharge spaces which are formed between the front cover plate and the back plate, the front cover plate and the back plate facing to each other.

29. (Original) The method of Claim 28, wherein

in the first step, the protecting layer is formed with one of a thermal Chemical Vapor Deposition method and a plasma Chemical Vapor Deposition method by using an alkaline earth organometallic compound and oxygen.

30. (Original) The method of producing a PDP of Claim 29, wherein

the alkaline earth organometallic compound used in the first step is one of an alkaline earth metal chelate compound and an alkaline earth cyclopentadienyl compound.

31. (Amended) The method of producing a PDP of Claim 30, wherein

The alkaline earth organometallic compound used in the first step is one of $M(C_{11}H_{19}O_2)_2$, $M(C_5H_7O_2)_2$, $M(C_5H_5F_3O_2)_2$, and $M(C_5H_5)_2$, wherein M represents one of magnesium, beryllium, calcium, strontium, and barium.

32. (Amended) A method of producing a plasma display panel having plurality of discharge space cells comprising the steps of:

depositing a protective layer of an alkaline earth oxide having a (110) crystal face orientation on a surface of a dielectric layer of a substrate;

and

introducing a discharge gas into each cell.

33. (Original) The plasma display panel method of Claim 32, wherein each cell is pressurized to a pressure of approximately 500 to 750 Torrs.

34. (Original) The plasma display panel method of Claim 33, wherein each cell is charged with a xenon discharge gas between 10% volume to approximately 100% by volume.

35. (Original) The plasma display panel method of Claim 34, wherein one of argon, krypton, helium, and neon is mixed with the xenon.

36. (Original) The plasma display panel method of Claim 34, wherein one of argon and krypton is mixed with the xenon in sufficient volume to provide ultraviolet light emission at a wavelength of 173 nm.

37. (Original) The plasma display panel method of Claim 34, wherein two additional discharge gases within the range of 10% to 50% by volume are mixed with the xenon.

38. (Original) The plasma display panel method of Claim 33, wherein a distance between adjacent display electrodes in the same plane is no greater than 0.1 mm.

39. (Original) The plasma display panel method of Claim 32, wherein the protective layer is selected from a group consisting of MgO, BeO, CaO, SrO, and BaO.

40. (Original) The plasma display panel method of Claim 32, wherein the protective layer is magnesium oxide with a crystal face orientation of (110).

41. (Original) The plasma display panel method of Claim 32, wherein the first substrate includes a dielectric layer and the dielectric layer is heated to a temperature between 350°C to 400°C during the depositing of the protective layer by a thermal chemical vapor deposition.

42. (Original) The plasma display panel method of Claim 32, wherein the front substrate includes a dielectric layer and the dielectric layer is heated to a temperature between 250°C to 300°C during the depositing of the protective layer by a plasma chemical vapor deposition.

43. (Original) The plasma display panel method of Claim 32, wherein the front substrate includes a glass plate and display electrodes are formed by depositing a conductive paste on the glass plate, the paste is then baked to be hardened and the display electrodes subsequently are sandwiched between the glass plate and the dielectric layer.

44. (Original) The plasma display panel method of Claim 32, wherein the protective layer is deposited by transferring a paste of the alkaline earth oxide to the front substrate and baking it.

45. (Original) The plasma display panel method of Claim 44, wherein the paste is magnesium salt with a plate-shaped crystal structure.

46. (Original) The plasma display panel method of Claim 45, wherein the paste is magnesium oxalate formed by dissolving ammonium oxalate in a magnesium chloride aqueous solution and heating it to form the plate-shaped crystal structure.

47. (Original) The plasma display panel method of Claim 32, wherein the depositing of the protective layer is made by evaporating the alkaline earth oxide with an ion/electron beam in a vacuum.

48. (Original) A method of producing a plasma display panel having a plurality of discharge space cells comprising:

depositing a protective layer of an alkaline earth compound selected from the group consisting of $M(C_{11}H_{19}O_2)_2$, $M(C_5H_7O_2)_2$, $M(C_5H_5F_3O_2)_2$, and $M(C_5H_5)_2$, wherein M represents one of magnesium, beryllium, calcium, strontium, and barium, the protective layer having one of a (100) crystal-face orientation and a (110) crystal-face orientation extending across a surface of each cell; and

introducing a discharge gas into each cell.

49. (Original) The plasma display method of Claim 48, wherein the protective layer is deposited by one of a thermal chemical vapor deposition step and a plasma enhanced chemical vapor deposition step.

50. (Original) The plasma display method of Claim 49, wherein the discharge gas includes at least 10% by volume Xe and is at a pressure of at least 500 Torr.

51. (Original) The plasma display method of Claim 50, wherein the discharge gas includes one of Ar and Kr.

52. (Amended) The plasma display method of Claim 50, wherein the discharge gas is selected from a group consisting of Ar-He-Xe, Kr-Ne-Xe, and Kr-He-Xe and the amount of Kr, Ar, He, or Ne should be in the range of 10% to 50% by volume.

53. (Original) The plasma display method of Claim 50, wherein the alkaline earth compound is selected from the group consisting of magnesium dipivaloyl methane, magnesium acetylacetone, magnesium trifluoroacetylacetone, and cyclopentadienyl.

54. (Original) A method of producing a plasma display panel having a plurality of discharge space cells comprising the steps of:

depositing a protective layer selected from the group consisting of magnesium dipivaloyl methane, magnesium acetylacetone, magnesium trifluoroacetylacetone, and cyclopentadienyl magnesium across a surface of each cell to provide one of a (100) crystal-face orientation and a (110) crystal-face orientation; and

charging each cell with a discharge gas including at least 10% by volume Xe at a pressure of at least 500 Torr.

55. (Original) In a method of producing a plasma display panel having a plurality of discharge space cells with dielectric layers, the improvement comprising:

evaporating with an electron gun an alkaline earth oxide; and

forming a protective layer of the alkaline earth oxide with (110) crystal-face orientation on the dielectric layer.

56. (Original) The method of Claim 55, wherein the alkaline earth oxide is magnesium oxide.

57. (Original) The method of Claim 55, wherein the temperature of the dielectric layer was between 250°C and 300°C.

58. (Original) In a method of producing a plasma display panel having a plurality of discharge space cells with dielectric layers, the improvement comprising:

evaporating a metal chelate of alkaline earth oxide in a bubbler;

transferring the evaporated metal chelate of alkaline earth oxide to a reaction container;

reacting the evaporated metal chelate of alkaline earth oxide with oxygen; and

forming a protective layer of alkaline earth oxide with (100) crystal-face orientation on the dielectric layer.